



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,905	05/16/2007	Ernst-Werner Wagner	30000.0002	5041

57362 7590 02/01/2010
AKERMAN SENTERFITT
8100 BOONE BOULEVARD
SUITE 700
VIENNA, VA 22182-2683

EXAMINER

CERNOCH, STEVEN MICHAEL

ART UNIT	PAPER NUMBER
----------	--------------

3752

MAIL DATE	DELIVERY MODE
-----------	---------------

02/01/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/584,905	Applicant(s) WAGNER, ERNST-WERNER	
	Examiner STEVEN CERNOCH	Art Unit 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11, 12 and 14-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11, 12 and 14-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 11, 12, 14, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howell et al. (US Pat No 6,341,572) in view of Wagner et al. (US Pub No 2003/0226669).

Re claim 11, Howell et al. shows an inertization method for reducing the risk of fire in an enclosed protected area, in which the oxygen content in the protected area is maintained for a defined period at a control concentration below an operating concentration by feeding an oxygen-displacing gas from a primary source; wherein the control concentration and the operating concentration are lowered so far below the design concentration defined for the protected area that the growth curve of the oxygen content, reaches a limit concentration defined for the protected area only in a predefined time when the primary source fails (column 7, lines 66-67, column 8, lines 1-14 and lines 32-60 and column 9, lines 3-10).

Howell et al. does not show the margin between the design concentration and the operating concentration corresponding to a failure safety margin, and wherein the control concentration (RK) corresponds to the limit concentration (GK) less the failure safety margin (ASA) and a safety margin (S), such that the oxygen content in the protected area is reduced to the control concentration (RK) which is much lower than the limit concentration (GK).

However, Wagner et al. does teach a failure safety margin (paragraph 0008-0023), and wherein the control concentration (RK) corresponds to the limit concentration (GK) less the failure safety margin (ASA) and a safety margin (S), such that the oxygen content in the protected area is reduced to the control concentration (RK) which is much lower than the limit concentration (GK) (paragraph 0027).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify prevention system of Howell et al. with the safety margin of Wagner et al. is that of a second basic level of inertion can be adjusted for extinguishing operations (paragraph 0026).

Re claim 12, Howell et al. does not show wherein the failure safety margin (ASA) is determined by taking an air change rate applicable for the protected area, including an n_{s0} value for the protected area, and/or the pressure differential between the protected area and the surrounding area into consideration.

However, Wagner et al. does show wherein the failure safety margin (ASA) is determined by taking an air change rate applicable for the protected area, including an n_{s0} value for the protected area, and/or the pressure differential between the protected area and the surrounding area into consideration (paragraph 0008 - 0023).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify prevention system of Howell et al. with the safety margin of Wagner et al. is that of a second basic level of inertion can be adjusted for extinguishing operations (paragraph 0026).

Re claim 14, Howell et al. does not show a detector for detecting a fire parameter, wherein the oxygen content in the protected area is lowered quickly to the control concentration upon detecting an incipient fire or a fire when the oxygen content was previously at a higher level.

However, Wagner et al. does teach a detector for detecting a fire parameter, wherein the oxygen content in the protected area is lowered quickly to the control concentration upon detecting an incipient fire or a fire when the oxygen content was previously at a higher level (paragraph 0027).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify prevention system of Howell et al. with the detection signal of Wagner et al. for an advantage in fire prevention (paragraph 0027).

Re claim 15, Howell et al. does not show wherein the control range is about $\pm 0.2\%$ by volume oxygen content around the control concentration (RK).

However Wagner et al. does teach wherein the control range is about $\pm 0.2\%$ by volume oxygen content around the control concentration (RK) (Fig. 4).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify prevention system of Howell et al. with the control range of Wagner et al. to allow the necessary concentration and volume ratios to be coordinated with the flammable materials present mainly in the areas used (paragraph 0055)

Re claim 17, Howell et al. does not show wherein the extinguishing agent for maintaining the control concentration (RK) in the protected area is calculated with respect to the air change rate of the target area, including the ns0 value of the protected area, and/or the pressure differential between the target area and the surrounding area.

However, Wagner et al. does teach wherein the extinguishing agent for maintaining the control concentration (RK) in the protected area is calculated with respect to the air change rate of the target area, including the ns0 value of the protected area, and/or the pressure differential between the target area and the surrounding area (paragraph 0013).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify prevention system of Howell et al. with formula of Wagner et al. to have the ability to conclude the necessary oxygen levels from a height ratio.

Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howell et al. (US Pat No 6,341,572) in view of Wagner et al. (DE 19811851 A1).

Re claim 16, Howell et al. does not teach wherein the oxygen content in the protected area is controlled with respect to the air change rate, including the n50 value of the protected area, and/or the pressure differential between the protected area and the surrounding area.

However Wagner et al. does teach wherein the oxygen content in the protected area is controlled with respect to the air change rate, including the n50 value of the

Art Unit: 3752

protected area, and/or the pressure differential between the protected area and the surrounding area (column 2, lines 6-68 and column 3, lines 1-8).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify prevention system of Howell et al. with oxygen content of Wagner et al. as the oxygen-expulsion inert gas containers is clearly reduced (column 2, lines 23-26).

Re claim 18, Howell et al. shows wherein the primary source is at least a machine that produces oxygen-displacing gas, a cylinder array, a buffer volume or a de-oxydation machine (column 9, lines 50-67 and column 10, lines 1-35).

Response to Arguments

Applicant's arguments filed 11/5/2009 have been fully considered but they are not persuasive. Regarding applicant's arguments that Howell is silent to the newly amended claim limitations, they are correct. However, Wagner et al. does teach a failure safety margin and the stipulated limitation of lowering the control concentration to that of something much lower than the limit concentration. The description of Wagner et al. from the arguments presented March 26th of 2009 is only partially correct. Specifically, paragraphs 0027 and 0028 of Wagner et al. teach a failure safety margin of 10% as shown in paragraph 0028 to which it says "especially advantageous is an oxygen content of the buffer volume of 10 percent by volume or less." At which point, in paragraph 0027 it states "a possible fire is advantageously prevented or, however, extinguished owing to a fire detection signal, if the ambient air of the target area is mixed with the buffer gas volume in such a way that an average oxygen concentration

between 8 and 17 percent by volume occurs in the target area on account of the specified quantity and concentration ratios of oxygen in both areas.” Therefore Wagner et al. does teach a concentration much lower than the limit concentration (GK) in 8 percent by volume.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN CERNOCH whose telephone number is (571)270-3540. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Len Tran can be reached on (571)272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3752

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. C./
Examiner, Art Unit 3752

/Dinh Q Nguyen/
Primary Examiner, Art Unit 3752